

LENS ASSEMBLY WITH EXTERNALLY ADJUSTABLE
LENS SPACING, AND METHOD FOR ITS ASSEMBLY

ABSTRACT OF THE DISCLOSURE

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A lens assembly includes a housing having a housing body, a cylindrical bore in the housing body with an internal bore surface and a cylindrical housing axis, at least one access window through the housing body that permits external access to an interior of the housing body, and an interior
10 helical recess in the bore surface. A cylindrical lens element has an external cylindrical lens element surface received within the cylindrical bore of the housing and a cylindrical lens-element axis coincident with the cylindrical housing axis. The lens element includes a lens positioned perpendicular to the cylindrical lens-element axis, an adjustment engagement that is externally
15 accessible through the access window of the housing, and an exterior helical recess in the external cylindrical lens element surface. The exterior helical recess has the same pitch as the interior helical recess and is in facing relation to the interior helical recess. The lens assembly is assembled and adjusted by rotatably engaging the interior helical recess and the facing exterior helical
20 recess with a thread wire; and adjusting the axial position of the lens element by rotating the lens element relative to the housing body. The approach may be used with multiple lens elements.